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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,523	07/05/2001	Rick Winter		9914

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EXAMINER

SIEFKE, SAMUEL P

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,523

Applicant(s)

WINTER, RICK

Examiner

Samuel P. Siefke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/29/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 11 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 11 and 18-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because they are informal and hard to understand. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Objections

Claim 11 is objected to because of the following informalities: It is not dependent on another claim. Appropriate correction is required. Examiner is assuming it is dependent on claim 18.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-6, 11, 18-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

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which applicant regards as the invention. It is unclear and indefinite to claim a containment member that is located underneath and exterior to a plurality of stacked cells. It is unclear as to which containment member the applicant is referring to in the claims. See figure 1, ref. 12 and 14. Both are containment members.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-6, 11 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eidler et al. (USPN 6,242,125) in view of Barr et al. (USPN 4,628,302).

Eidler discloses a battery circulation system that comprises a container (13, containment member; col. 3, lines 58- lines 66) which provides flowing electrolyte to at least one stack of a flowing electrolyte battery (19, col. 3, line 66- col. 4, line 3); liquid level sensors (130) are provided in each electrolyte reservoir and couple in data exchange relation to the controller (21) (col. 6, lines 11-20). If an imbalance in levels is sensed, as indicated by a high liquid level sensor value, the speed of the anolyte pump (30) may adjust to even out the levels. As with a high level condition, if both liquid level sensors in the reservoirs 15 and 17 sensed a "low" level, the batteries 19 are shut down by the controller. Such a condition would indicate a leak of electrolyte from some location in the system 10 (col. 6, lines 26-33). Once shut down the leak could be investigated and repaired before the battery was again operated. The wire diagram can be seen in Figure 1A, which includes a controller being connected with the level sensors and power leads in parallel connections which include switches.

Eidler discusses a liquid level sensor that triggers a response to a low or high level of an electrolyte in a reservoir but does not specifically disclose a circuit is switched on or off when a liquid completes the circuit.

Barr teaches a simple liquid level sensor that comprises a first probe and a second probe, and liquid that comes into contact with both probes to complete a circuit (col. 1, lines 6-27; col. 2, line 59 –col. 3, line 40) and close the circuit. A resistor is positioned parallel to multiple switches (col. 4, lines 7-25). All the switches are wired to a controller (41). It would have been obvious to modify Eidler to include the liquid sensor of Barr because these sensors are known in the art to be used to close circuits

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when a liquid is present, in this case to shut down pumps in order to contain a leak and investigate further where the leak is coming from. It would have been obvious to include such a sensor "switch" within the circulation system of Eidler as the liquid being sensed is an electrolyte which would be capable of providing the circuit completion. Such a modification would also allow placement of the switch at a point in the system of Eidler which would minimize electrolyte leakage.

Response to Arguments

Applicant's arguments filed 8/29/05 have been fully considered but they are not persuasive. The Examiner would like to point out and clarify the interpretation of the prior art in light of the current application. Claim 18 and 21 require a containment member. The containment member in Eidler is the housing 13 because it encloses the entire system and would collect any leaking reservoir fluid if a leak occurred from a cell stack. Claim 18 further requires the containment member to be disposed underneath (bottom of container 13) and exterior to the plurality of stacked cells. The containment member of Eidler as previously discussed is positioned in this manner. Eidler teaches a leveling sensor that is disposed in the space between the interior of the containment member and the exterior of the stacked cells. The Examiner recognizes that the sensor is a fluid leveling sensor, but claim 1 only claims for a sensor, and since the sensor detects the presences of electrolyte fluid in the space between the interior of the containment member and the exterior of the stacked cells it meets all the limitations of

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instant claims. The leveling sensor in an indirect way, low electrolyte level, detects an electrolyte leak in the stacked cells.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel P. Siefke whose telephone number is 571-272-1262. The examiner can normally be reached on M-F 7:00am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1700. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam P. Siefke



September 26, 2005


Jill A. Warden
Supervisory Patent Examiner
Technology Center 1700